

Miniature Power PCB RYII & RYII Reflow Solderable RY900108, RY900109, RY900110, RY900111, RY900112, RY900133

- 1 pole 8A, 1 form C (CO) or 1 form A (NO) or 1 form B (NC) contact
- Low component height 12.3mm
- 5kV/8mm coil-contact
- Reinforced insulation (protection class II)
- Pinnings: 3.2mm and 5mm
- **■** Reflow-solderable version
- **■** Sockets with PCB-type terminals
- Especially suitable for resistive and inductive loads on form A (NO) and form B (NC) contacts
- Plastic materials according to IEC 60335-1 (domestic appliances)

Typical applications

heating control, interface technology, domestic appliances, timers, temperature control



F0142-E



| Approvals |
|---|
| VDE Cert. No. 40009639, UL E214025 |
| Technical data of approved types on request |

| Contact Data | | | |
|--|--------------------------------------|--|--|
| Contact arrangement | 1 form C (CO) or | | |
| | 1 form A (NO) or | | |
| | 1 form B (NC) | | |
| Contact set | single contact | | |
| Type of interruption | micro disconnection | | |
| Rated voltage | 250VAC | | |
| Max. switching voltage | 400VAC | | |
| Rated current | 8A | | |
| Breaking capacity AC max. | 2000VA | | |
| Contact material | AgNi0.15, AgSnO ₂ , AgCdO | | |
| Mechanical endurance | 30x10 ⁶ cycles | | |
| Frequency of operation, with/without loa | d 6/1200min ⁻¹ | | |

Contact ratings

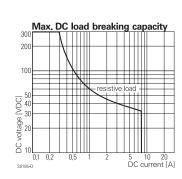
| Contact ratings | | |
|------------------|-------------------------------------|-------------------|
| Туре | Load | Cycles |
| RY**1*** | A (NO), 8A, 250VAC, resistive, 70°C | 1x10 ⁵ |
| RY**1*** | B (NC), 8A, 250VAC, resistive, 70°C | 5x10 ⁴ |
| RY**(0, 1, 2)*** | 8A, 30VDC, UL 508 | 3x10 ⁴ |
| RY**(0, 1, 2)*** | 0.28A, 250VDC, UL 508 | 3x10 ⁴ |
| RY**(0, 1, 2)*** | 1/2 HP, 240VDC, UL 508 | |
| RY**(0, 1, 2)*** | 1/4 HP, 120VDC, UL 508 | |
| RY**(0)*** | 8A, 415VAC, resistive, UL 508 | 6x10 ³ |
| RY**(0, 1, 2)*** | Pilot duty - B300, UL 508 | 6000 |
| RY*** *** | C (CO), 8A, 250VAC, resistive, 70°C | 5x10 ³ |
| RY**1 *** | 6(4)A, 250VAC, 85°C, EN60730 | 1x10 ⁵ |

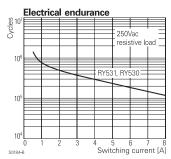
| Coil Data | |
|----------------------------|-------------|
| Coil voltage range DC coil | 5 to 60 VDC |
| Coil power DC coil | typ. 220 mW |
| Operative range | 2 |

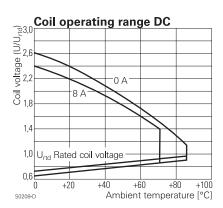
Coil versions, DC coil

| Coil | Rated | Operate | Release | Coil | Rated coil |
|------|---------|---------|---------|------------|------------|
| code | voltage | voltage | voltage | resistance | power |
| | VDC | VDC | VDC | Ω±10% | mW |
| 005 | 5 | 3.5 | 0.5 | 112 | 223 |
| 006 | 6 | 4.2 | 0.6 | 162 | 222 |
| 009 | 9 | 6.3 | 0.9 | 320 | 253 |
| 012 | 12 | 8.4 | 1.2 | 627 | 230 |
| 024 | 24 | 16.8 | 2.4 | 2350 | 245 |
| 048 | 48 | 33.6 | 4.8 | 9391 | 245 |
| 060 | 60 | 42.0 | 6.0 | 14000 | 257 |

All figures are given for coil without pre-energization, at ambient temperature +23°C Other coil voltages on request









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| Insulation Data | CO contac | et NO | contact |
|------------------------------------|-----------|---------------|-----------|
| Initial dielectric strength | | | |
| between open contacts | | $1000V_{rms}$ | |
| between contact and coil | | $5000V_{rms}$ | |
| Clearance/creepage | | | |
| between contact and coil | | ≥8/8mm | |
| Material group of insulation parts | | Illa | |
| Tracking index of relay base | | PTI250 | |
| reflow-solderable version | | PTI175 | |
| Insulation to IEC 60664-1 | | | |
| Type of insulation | | | |
| coil-contact circuit | | reinforced | |
| opent contact circuit | | functional | |
| Rated insulationvoltage | 250 V | | 250 V |
| Pollution degree | 3 | 2 | 3 |
| Rated voltage system | 230 V | 400 V | 230/400 V |
| Overvoltage category | III | | III |

Other Data

Material compliance: EU RoHS/ELV, China RoHS, REACH, Halogen content refer to the Product Compliance Support Center at www.te.com/customersupport/rohssupportcenter

| www.te.com/ | <u>customersupport/ronssupportcenter</u> |
|--|--|
| Flammability class according to UL94 | V-0 |
| GWFI to IEC 60335-1 | > 850°C |
| GWT to IEC 60335-1 | > 750°C |
| Ambient temperature | -40 to +70°C |
| max. | +85°C at 6A |
| Category of environmental protection | |
| IEC 61810 | RTII - flux proof |
| | RTIII - wash tight** |
| Vibration resistance (functional), | |
| form A (NO)/form B (NC) | 20/5g |
| Shock resistance (functional) | |
| form A (NO)/form B (NC) | 20/5g |
| Shock resistance (destructive) | 100g |
| Operate- / release time | typ. 7/3 ms |
| Bounce time | |
| form A (NO)/form B (NC) | typ. 2.5 / 4.5 ms |
| Mounting | PCB |
| Mounting position | any |
| Minimum mounting distance | ≥0 mm |
| Resistance to soldering heat | |
| flux proof version | 270°C/10s |
| wash tight version | 260°C/5s |
| Weight | 8g |
| Packaging/unit | 20 / 500 pcs |
| **) not available as reflow-solderable version | |

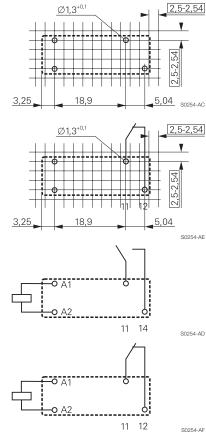
Accessories Accessories Miniature PCB Relay RY For details see datasheet

PCB layout / terminal assignment

Bottom view on solder pins

1 form C (CO) contact, 3.2mm 18,9 S0254-AA



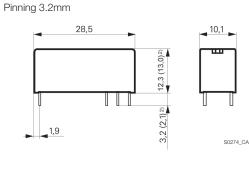


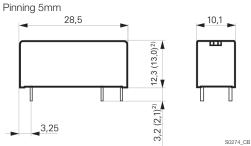
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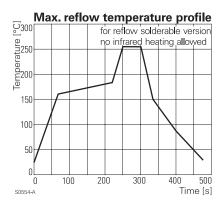
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Dimensions





Soldering profile for reflow-solderable version



| Prod | uct code structure Typic | al prod | duct code | RY | 6 | 1 | 1 | 012 | |
|--------------------|---|---------|---------------------------------|---------------------------|------------|---|---|-----|--|
| Type RY | Miniature Power PCB RYII & RYII reflow so | olderak | ole | _ | | | | | |
| Version 2 5 | pinning 3.2mm, flux proof pinning 5mm, flux proof | 6 A | | .2mm, wash mm, wash ti | | | | | |
| Conta | act configuration form C (CO Contact), pinning 3.2mm | 3 | form A (N | IO contact), p | oinning 5m | | | | |
| Conta 0 1 | act material AgCdO AgNi 0.15 | 2 3 | AgNi 0.15 AgSnO ₂ | 5 gold plated | | | | | |
| Coil | Coil code: please refer to coil versions tab | le | | | | | | | |
| Versio Bla R | | | | | | | | | |

^{**)} not available as reflow-solderable version Other types on request

Overview special PN Crouzet

Deviation to standard data sheet

| Special PN for Crouzet | Part Number | Difference to standard version |
|------------------------|-------------|--------------------------------------|
| RY900108 (RY211006) | 9-1415398-1 | Rk < 50mOhm at Testcondition 6V/10mA |
| RY900109 (RY211012) | 1415399-1 | Rk < 50mOhm at Testcondition 6V/10mA |
| RY900110 (RY211024) | 1-1415399-1 | Rk < 50mOhm at Testcondition 6V/10mA |
| RY900111 (RY611012) | 7-1415500-1 | Rk < 50mOhm at Testcondition 6V/10mA |
| RY900112 (RY611024) | 8-1415500-1 | Rk < 50mOhm at Testcondition 6V/10mA |
| RY900133 (RY611005) | 1-1956164-2 | Rk < 50mOhm at Testcondition 6V/10mA |



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| Product code | Version | Contacts | Contact material | Coil | Part Number |
|--------------|----------------|---------------|--------------------|------------------|-------------|
| RY210005 | pinning 3.2 mm | 1 form C (CO) | AgCdO | 5 VDC | 3-1393224-1 |
| RY210012 | flux proof | contact | | 12 VDC | 3-1393224-5 |
| RY210024 | · | | | 24 VDC | 3-1393224-8 |
| RY210048 | | | | 48 VDC | 4-1393224-1 |
| RY211005 | | | AqNi 0.15 | 5 VDC | 4-1393224-2 |
| RY211012 | | | | 12 VDC | 4-1393224-6 |
| RY211024 | | | | 24 VDC | 4-1393224-9 |
| RY211048 | | | | 48 VDC | 5-1393224-1 |
| RY212005 | | | AgNi 0.15 | 5 VDC | 5-1393224-2 |
| RY212012 | | | gold plated | 12 VDC | 5-1393224-5 |
| RY212024 | | | general promoter | 24 VDC | 5-1393224-8 |
| RY212048 | | | | 48 VDC | 5-1393224-9 |
| RY213005 | | | AgSnO ₂ | 5 VDC | 6-1393224-0 |
| RY213012 | | | 1.902 | 12 VDC | 6-1393224-1 |
| RY213024 | | | | 24 VDC | 6-1393224-2 |
| RY213048 | | | | 48 VDC | 6-1393224-3 |
| RY530005 | pinning 5 mm | 1 form A (NO) | AgCdO | 5 VDC | 6-1393224-6 |
| RY530012 | flux proof | contact | , igodo | 12 VDC | 6-1393224-9 |
| RY530024 | παχ ρισσι | Contact | | 24 VDC | 7-1393224-2 |
| RY530048 | | | | 48 VDC | 7-1393224-4 |
| RY531005 | | | AgNi 0.15 | 5 VDC | 7-1393224-6 |
| RY531012 | | | Ag(4) 0.15 | 12 VDC | 7-1393224-9 |
| RY531024 | | | | 24 VDC | 8-1393224-2 |
| RY531048 | | | | 48 VDC | 8-1393224-3 |
| RY532012 | | | AgNi 0.15 | 12 VDC | 8-1393224-4 |
| RY532024 | | | | 24 VDC | 8-1393224-4 |
| | | | gold plated | | 8-1393224-8 |
| RY533012 | | | AgSnO ₂ | 12 VDC | 8-1393224-8 |
| RY533024 | | | | 24 VDC 48 VDC | |
| RY533048 | -11 | 1 (0 (00) | A = 0 = 10 | 5 VDC | 9-1393224-0 |
| RY610005 | pinning 3.2 mm | 1 form C (CO) | AgCdO | 12 VDC | 1393225-7 |
| RY610012 | wash tight | contact | | | 1-1393225-0 |
| RY610024 | | | | 24 VDC | 1-1393225-4 |
| RY610048 | | | A - N I: O 1 F | 48 VDC | 1-1393225-5 |
| RY611005 | | | AgNi 0.15 | 5 VDC | 1-1393225-7 |
| RY611012 | | | | 12 VDC | 1-1393225-9 |
| RY611024 | | | | 24 VDC | 2-1393225-1 |
| RY611048 | | | A NII 0 45 | 48 VDC | 2-1393225-2 |
| RY612005 | | | AgNi 0.15 | 5 VDC | 2-1393225-3 |
| RY612012 | | | gold plated | 12 VDC | 2-1393225-6 |
| RY612024 | | | | 24 VDC | 2-1393225-9 |
| RY612048 | | | A =:0:=0 | 48 VDC 5 VDC | 3-1393225-0 |
| RY613005 | | | AgSnO ₂ | | 5-1419136-2 |
| RY613012 | | | | 12 VDC | 3-1393225-1 |
| RY613024 | | | | 24 VDC | 3-1393225-3 |
| RY613048 | | | 1.0.10 | 48 VDC | 3-1393225-4 |
| RYA30005 | pinning 5 mm | 1 form A (NO) | AgCdO | 5 VDC | 1393224-1 |
| RYA30012 | wash tight | contact | | 12 VDC | 1393224-4 |
| RYA30024 | | | | 24 VDC | 1393224-6 |
| RYA30048 | | | | 48 VDC | 7-1393225-7 |
| RYA31005 | | | AgNi 0.15 | 5 VDC | 1393224-7 |
| RYA31012 | | | | 12 VDC | 1393224-9 |
| RYA31024 | | | | 24 VDC | 1-1393224-2 |
| RYA31048 | | | | 48 VDC | 1-1393224-3 |
| RYA32005 | | | AgNi 0.15 | 5 VDC | 1-1393224-4 |
| RYA32012 | | | gold plated | 12 VDC | 1-1393224-6 |
| RYA32024 | | | | 24 VDC | 1-1393224-8 |
| RYA33005 | | | AgSnO ₂ | 5 VDC | 1-1393224-9 |
| RYA33024 | | | | 24 VDC | 2-1393224-1 |